

ABSTRACT OF THE DISCLOSURE

A system for servicing communication queues may include memory configured to store a hierarchical channel map having a plurality of levels wherein each bit of the lowest level is mapped to a different one of a plurality of communication channels and wherein each bit of each higher level is mapped to a group of bits at the next lower level. The system may include a host adapter configured to maintain the hierarchical bitmap wherein each bit at the lowest level is set if the channel to which it is mapped has a pending communication request and is cleared if not. Each bit of each higher level is set if at least one bit is set in the lower level group to which is mapped and cleared if not. The host adapter may be configured to examine the hierarchical bitmap in order to determine a next one of the communication channels to service. At each level of the hierarchical channel map a service mask may be provided to track which bits have already been traversed at that level. Multiple such service masks may be provided at each level to support different service classes.